

- (5) *Ibid.*, 29.57 (a).
 (6) *Ibid.*, 29.58.
 (7) *Ibid.*, 29.64.
 (8) *Ibid.*, 29.65.
 (9) Bentley, R. and Neuberger, A., *Biochem. J.*, 45, 584 (1949).
 (10) Keilin, D. and Hartree, E. F., *ibid.*, 42, 221 (1948).
 (11) Keilin, D. and Hartree, E. F., *ibid.*, 50, 331 (1952).
 (12) McIlvaine, T. C., *J. Biol. Chem.*, 49, 183 (1921).
 (13) Potter, E. F. and Williams, K. T., *This Journal*, 41, 681 (1958).
 (14) Potter, E. F., Wilson, J. R., and Williams, K. T., *ibid.*, 42, 650 (1959).
 (15) Williams, K. T. and Potter, E. F., *ibid.*, 40, 373 (1957).
 (16) Williams, K. T. and Potter, E. F., *ibid.*, 41, 307 (1958).

Report on Tobacco*

By C. L. OGG (Eastern Regional Research Laboratory,[†] Philadelphia 18, Pa.)

A study of the determination of alkaloids was conducted using both the Cundiff-Markunas extraction method and a distillation procedure based on the results of last year's studies. The two methods proved about equally reliable for total alkaloids, and the modified Cundiff-Markunas method was satisfactory for determining tertiary and secondary alkaloids as nicotine and nornicotine, respectively.

Two other studies are in progress; one on the determination of nicotine, total particulate matter, and moisture in tobacco smoke, and the other on petroleum ether solubles in tobacco. Neither of these studies has progressed far enough to warrant a report this year.

It is recommended¹—

(1) That the distillation procedure for total alkaloids (as nicotine) in tobacco tested this year be adopted as first action.

(2) That the modified Cundiff-Markunas method for secondary, tertiary, and total alkaloids be adopted as first action.

(3) That studies on the Cundiff-Markunas method be continued.

(4) That studies on the determination of nicotine, total particulate matter, and moisture in cigarette smoke be continued.

(5) That studies on methods for determining petroleum ether extractives be continued.

(6) That other studies be initiated in cooperation with the Analytical Methods Committee of the Tobacco Chemists' Conference.

* Presented by the General Referee on Tobacco at the Seventy-third Annual Meeting of the Association of Official Agricultural Chemists, Oct. 12-14, 1959, at Washington, D.C.

[†] Eastern Utilization Research and Development Division, Agricultural Research Service, U.S. Department of Agriculture.

¹ These recommendations were approved by Subcommittee A and adopted by the Association. See *This Journal*, 43, 126 (1960).